REPLACEMENT FOR ARISTONCAVI URSUS® | 0.6/1 kV | NSHTÖU-O/J | PCP rubber | article datasheet

FC-RLX 18G4 0.6/1 kV

Reeling Control Cable – polychloroprene (PCP/CR) rubber compound 5GM5 to DIN VDE 0207-21, black. FeiChun replacement for Aristoncavi URSUS®: construction, dimensions, weight, current rating, standards and installation guidance.

Document no. FC-TDS-AR0134-2026-9BEA-EN · Revision 0 · Issued 4 November 2026 · Language: English (AU)

01 Application and Product Overview

FC-RLX 18G4 is a reeling Control Cable rated 0.6/1 kV and the FeiChun replacement for Aristoncavi URSUS® 18G4. It has an outer diameter of 29.5 – 31.5 mm, weighs about 1,340 kg/km and carries 21 A in free air at 30 °C. The series covers 1.5 – 4 mm².

Design

18 numbered black cores, including one green-yellow protective core, are stranded in concentric layers. Short lay lengths and an anti-twist braid limit corkscrewing on the reel.

Typical applications

- Control and signalling circuits through cable reels of cranes and conveyors
- Trolleys, hoists and travelling machines with spring-driven or motor-driven reels
- Replacement of several small control cables by one multicore reeling cable
- Outdoor service with oil, UV radiation and ozone

18G4	0.6/1 kV	21 A	Ø 31.5 mm
Cross-section	Rated voltage U_0/U	Current at 30 °C	Outer dimension, max

Key features

- Fine-wire class 5 tinned or bare copper conductors to IEC 60228
- EPR rubber compound 3GI3 to DIN VDE 0207-20 insulation
- Travel speed up to 120 m/min, torsion up to ±25 °/m
- Flame-retardant to IEC 60332-1-2; oil, ozone and UV resistant

Replacement reference

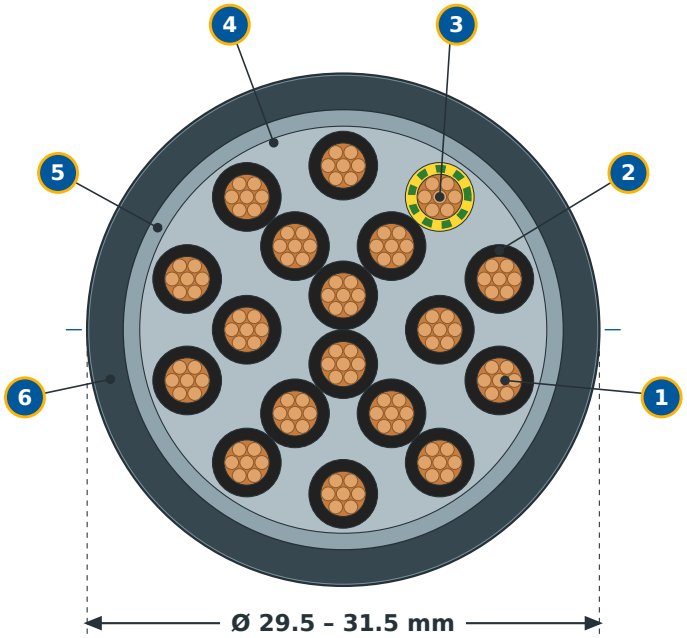
REFERENCE PRODUCT	⇄	FEICHUN REPLACEMENT
Aristoncavi URSUS® 18G4 NSHTÖU-O/J		**FC-RLX 18G4 0.6/1 kV** Reeling Control Cable

The FeiChun cable has the same core configuration, voltage rating and field of application as the reference product. Dimensions and weights are FeiChun design values; compare them with reels, guides and glands before direct replacement.

02 Construction

FEICHUN · CROSS-SECTION A-A · 0.6/1 kV

FC-RLX
Sample size 18G4 · Rev 0 · Illustrative, not to scale



No.	Component	Material
1	Conductor	Fine-wire copper, class 5 to IEC 60228
2	Insulation	EPR rubber compound 3GI3 to DIN VDE 0207-20
3	Protective conductor	Green-yellow insulated copper
4	Filler and anti-twist braid	Rubber compound, polyester braid
5	Inner sheath	Rubber or elastomer compound
6	Outer sheath	Polychloroprene (PCP/CR) rubber compound 5GM5 to DIN VDE 0207-21, black

The drawing shows 18G4. Other sizes have the same construction with scaled dimensions.

Construction details

Conductor	Fine-wire tinned or bare copper, class 5 to IEC 60228 / DIN VDE 0295
Insulation	EPR rubber compound 3GI3 to DIN VDE 0207-20
Core identification	Black cores with white numbers; green-yellow protective core
Inner sheath	Rubber or elastomer compound
Outer sheath	Polychloroprene (PCP/CR) rubber compound 5GM5 to DIN VDE 0207-21, black

Sheath material

Polychloroprene (PCP/CR) rubber 5GM5 is the classic heavy-duty sheath of DIN VDE 0250 cables: flame-retardant, resistant to oil, weather, ozone and UV radiation, and elastic under repeated bending.

03 Electrical, Thermal and Mechanical Data

Electrical data

Rated voltage U_0/U	0.6/1 kV AC
Test voltage	3.5 kV AC, 5 min
Current-carrying capacity	DIN VDE 0298-4, 30 °C ambient; see table
Conductor resistance	Maximum at 20 °C, class 5 to IEC 60228

Thermal and mechanical data

Maximum conductor temperature	+90 °C
Short-circuit temperature	+250 °C
Ambient temperature, fixed	-40 ... +80 °C
Ambient temperature, moving	-25 ... +80 °C
Minimum bending radius, moving	See table (6 × D)
Maximum tensile load	20 N/mm² of copper cross-section of the power cores
Maximum travel speed	120 m/min
Maximum torsion	±25 °/m
Flame propagation	IEC 60332-1-2
Halogen-free sheath	No
Oil, ozone and UV resistance	Resistant

04 Dimensions, Weights and Ratings

The highlighted row is 18G4; the adjacent sizes of the series are shown for comparison.

Type designation	Article no.	Conductor Ø max mm	Outer Ø min mm	Outer Ø max mm	Min. bend radius mm	Weight approx. kg/km	Max. pull N	R_{20} max Ω/km	Current per core A	I_k (1 s) kA
18G2.5	FC-AR0134-18G25	2.2	26.0	27.5	164	970	900	7.98	15	0.357
18G4	**FC-AR0134-18G4**	**2.7**	**29.5**	**31.5**	**188**	**1,340**	**1,440**	**4.95**	**21**	**0.572**

Current-carrying capacity: design values to DIN VDE 0298-4, free air, 30 °C ambient; values per core include the derating for the number of cores. Pull force = 20 N/mm² × copper cross-section of the power cores. Dimensions and weights are nominal design values within manufacturing tolerances.

Ambient temperature factors

°C	20	25	30	35	40	45	50
Factor	1.08	1.04	1.00	0.96	0.91	0.87	0.82

Short-circuit rating

I_k = 0.143 kA/mm² × conductor cross-section for 1 s; for duration t: $I_{k,t} = I_{k,1s} / \sqrt{t}$.

05 Reel Design Data

Rated current for the number of layers on the reel (DIN VDE 0298-4 factors 0.80 / 0.61 / 0.49 / 0.41) and the minimum reel core diameter (2 × bending radius).

Type designation	Outer Ø max, mm	Min. reel core Ø, mm	Copper, kg/km	1 layer, A	2 layers, A	3 layers, A	4 layers, A
18G2.5	27.5	328	400	12	9	7	6
18G4	**31.5**	**376**	**640**	**17**	**13**	**10**	**9**

06 Selection Guide

Typical use: 18G4 carries 17 control circuits at up to 21 A per core; one cable of this type replaces 8 two-wire connections on the reel or festoon.

For comparison: 18G2.5 has 27.5 mm, 970 kg/km and 15 A; 18G4 has 31.5 mm, 1,340 kg/km and 21 A. Choose the smallest size whose current, after the temperature factors, covers the load.

Example. A circuit carries 16 A at 40 °C ambient. Required table current = 16 / 0.91 = 18 A, so 18G4 (21 A) is suitable.

On a reel with 2,500 mm flange diameter, 1,000 mm traverse and 376 mm core, about 4,095 m of 18G4 can be wound (indicative).

07 Standards and Testing

Standard	Scope
IEC 60228 / DIN VDE 0295	Conductors, class 5
DIN VDE 0298-3	Bending radii and tensile loads
DIN VDE 0298-4	Current-carrying capacity
IEC 60332-1-2	Flame propagation, single cable
DIN VDE 0250-814	Design reference for the construction
IEC 60811-404	Mineral oil resistance

Routine and type tests

- AC voltage test on every delivery length: 3.5 kV, 5 min
- Conductor resistance, dimensions and insulation thickness
- Continuity of all conductors
- Flame propagation, IEC 60332-1-2 (type test)

Test documentation: every delivery comes with a test certificate from FeiChun's own laboratory; third-party witnessed tests can be arranged at the buyer's cost.

08 Installation, Marking and Delivery

Installation guidance

- Unwind the cable tangentially from the drum; avoid loops, kinks and pulling over the drum flange.
- Keep the bending radius and tensile load within the values in this datasheet.
- Use a reel core diameter of at least twice the minimum bending radius; fit a guide so that turns do not cross.
- Before first operation, let the cable relax at full length to release torsion from transport.
- Connect the protective conductor at both ends before the other cores.

Sheath marking

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FEICHUN FC-RLX 18G4 0.6/1 kV [year] [metre mark]
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Packing and delivery

Packing	Steel or fumigated wooden drums; cable ends sealed
Delivery length	As ordered, in one continuous length
Lead time	2–3 weeks after technical approval
Warranty	1 year, covering failures not caused by human factors
Terms	FCA buyer's nominated forwarder's warehouse in China (Incoterms 2020); prices subject to LME copper

Order example: FC-RLX 18G4 0.6/1 kV – replacement for Aristoncavi URSUS® 18G4, 500 m on one drum. State type, cross-section, voltage, length per piece and installation conditions when requesting a quotation.

09 Certification and Quality

FeiChun holds CE (Low Voltage Directive), EAC and UKCA certificates and an ATEX documentation verification for defined product groups. Whether a certificate scope covers this construction is confirmed per project. All cable is routine-tested over 100 % of the delivered length.

10 Related Datasheets

This datasheet in Russian: FC-RLX 18G4 0.6/1 kV

- FC-RLX 18G2.5 0.6/1 kV – replacement for Aristoncavi URSUS®
- FC-RLX 18G1.5 0.6/1 kV – replacement for Aristoncavi URSUS®
- FC-RLX 3G1.5 0.6/1 kV – replacement for Aristoncavi URSUS®
- FC-RLX 4G1.5 0.6/1 kV – replacement for Aristoncavi URSUS®
- FC-RLX 5G1.5 0.6/1 kV – replacement for Aristoncavi URSUS®
- FC-RLX 3×35+3G6 0.6/1 kV – replacement for Aristoncavi URSUS®
- FC-RLX 7G1.5 0.6/1 kV – replacement for Aristoncavi URSUS®
- FC-RLX 12G1.5 0.6/1 kV – replacement for Aristoncavi URSUS®

Library overview: FeiChun replacements for Aristoncavi

Frequently asked questions

Can FC-RLX replace Aristoncavi URSUS® 18G4?

Yes. It is designed with the same core configuration, voltage rating and field of application. Compare the outer diameter, bending radius and weight with your reel, guides or glands before ordering; FeiChun confirms suitability on request.

What are the outer diameter and minimum bending radius of 18G4?

Outer diameter 29.5 – 31.5 mm; minimum bending radius in moving operation 188 mm (6 × D).

What current can 18G4 carry?

21 A in free air at 30 °C ambient per core. Apply the temperature factors in section 04.

Is the cable halogen-free?

No. The PCP rubber sheath contains halogen; a halogen-free PUR version can be offered.

11 Trademark Notice and Intellectual Property

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Document control

Document no. FC-TDS-AR0134-2026-9BEA-EN
Revision 0
Date 4 November 2026
Product FC-RLX 18G4 0.6/1 kV